



THE ASSAM GAZETTE

অসাধাৰণ

EXTRAORDINARY

প্ৰাপ্ত কৰ্তৃত্বৰ দ্বাৰা প্ৰকাশিত

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GOVERNMENT OF ASSAM

ORDERS BY THE GOVERNOR

DEPARTMENT OF HOUSING AND URBAN AFFAIRS

ADDENDUM

The 10th June, 2022

No. UDD(T)144/2022/10.- In pursuance of modification of the Government Notification No. UDD(T)144/2022/6 dated 17th March, 2022, published in Extraordinary Gazette Notification No. 221, dated 24th March, 2022, regarding notice for publication of the Draft Master Plan for Tangla, the Schedule, Report and maps of the Draft Master Plan is added and read as one and the same documents.

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CHAPTER – I INTRODUCTION

Urbanization is a continuous process. So, far industrialization has been treated as a necessary factor for urbanization but the recent trend reveals that growth and modernization in agricultural activities can also lead to urbanization by means of rural development strategy. So, far the process of urbanization in Assam is very slow and this is mainly due to industrial backwardness and dependence of agriculture on primitive methods to a great extent. According to 2011 census the percentage of urban population in Assam was 14.8 against all India figures of 31.1. For Udalguri district the figure is 4.52% which were quite below the state average. Tangla Town came into being as urban centre in the year 1962 when the first Town Committee was set up. Initially Tangla was a town of Darrang district of Assam but presently it is under Udalguri district of Assam under BTR. It is Class III town according to 2011 Census with a population of 17,183.

The latitude and longitude of Tangla Town are 26.6573⁰ N and 91.9124⁰ E respectively and it is 276 feet (84 M) above mean sea level.

This town is situated at a distance of 29 K. M. from District headquarter Udalguri on the eastern direction and 31 K. M. away from Mangaldoi town at the southern direction and also around 101 KM away from the State capital Guwahati. One major river named by Nonai is passing through the Tangla Town. The Distance of NH-15 from the Tangla Town is 31KM which is passing through the Mangaldoi town.

The main aim of the infrastructural development of Tangla town is to provide better facilities to the public. At the same time it is expected that this will provide convenience to all section of people, discipline and cleanliness and pollution control.

1.1 HISTORY:

During the Darangia Koch Dynasty Tangla was under Bhutan Kingdom and from the days of Koch dynasty Tangla is known as community business centre of Indo-Bhutan trade. At that time “CHATGARI” was the place for revenue collection of Bhutan king .Historian defined the name of Tangla is TANG+LA. Tang means small bungalow type hut and la means “LA” use for seal and joining cracks. Bhutia people use the Tang ghar to make La and so it is called Tangla. Though Tangla is Just 16 KM away from Indo-Bhutan border, so it has a historical importance from the days of Koch and Bhutan Kingdom. The importance of Tangla was going high at the time of British rule after extension of Rangiya –Tangla Railway line in the year 1912.

1.2 TOPOGRAPHY, CLIMATE & SOIL CONDITION:

Tangla occupies its position on the strip of flat land lying on the Mangaldoi- Bhutiachang Road (State Highway No-4).

The climatic condition of Tangla town is same as the average climate condition of the state.

Table No.1 Climate Data of Tangla (1971----2000, extremes1954—2003)

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Year
Record high °c	31.7	32.5	38.0	37.9	38.9	39.6	38.7	40.1	38.8	37	33.4	32.1	40.1
Av. high °c	24.5	25.6	29.7	30.1	30.6	32.3	32.4	33.0	31.8	30.9	28.8	25.4	29.6
Av. low °c	10.9	12.7	15.9	20.1	22.4	24.8	25.6	25.5	24.6	21.2	16.1	11.3	19.4
Record low °c	3.6	5.3	8.4	10.8	10.1	17.4	20.1	20.3	19.0	11.3	9.2	5.2	3.6
Av.Rainfall mm	11.3	18.2	37.7	193.4	274.2	373.1	366.3	265.1	249.6	103.9	20.7	10.8	1924.3
Av.Rainy days	0.9	1.8	3.1	9.5	10.7	12.3	14.6	11.2	10.2	4.9	1.2	0.7	80.8
Av.humadity (%)	75	72	62	72	76	78	79	80	83	80	76	75	76

(Source: Indian Metrological Department)

From the above table it is summarised that Tangla has a very pleasant weather i.e. not too hot in summer and not too cold in winter. Like the other parts of the North East, Tangla enjoys a heavy rainfall in the monsoon season. Rain fall is high from the month of May to September.

Tangla and its immediate neighboring areas enjoy a climate suitable for cultivation on paddy and tea. The soil within the Master Plan area is alluvial and comparatively less prone to annual floods which are a recurring feature in any parts of the state



1.3 URBAN MORPHOLOGY AND PHYSICAL SETTING:

The town first sprawled surrounding the Tangla Railway Station which is situated at ward No.1 from the year 1912. Later on the town sprawled along the major transport corridors like Mangaldoi- Bhutichang Road (M.B Road, State highway No-4) and Udalguri- Tamulpur Road etc. with gradual Ribbon type development along the arteries. The average length of the town is 8 K. M. from east to west direction and the average breath is 6.15 K. M. from north to south direction.

1.4 NEED FOR THE MASTER PLAN

Before preparation of draft Master Plan for Tangla following aspects are to be taken in to consideration.

1. Tangla is one of the major business centre for Indo-Bhutan trade because of it's locational advantage (Proximity to Indo-Bhutan border) and better railway connectivity and proper emphasis must be given to create Tangla as a major business hub.
2. Tangla may be developed as a transit point for the surrounding tourist spots like Bornodi wildlife santury, Bogamati tourist spot and Khalingduar Reserve forest.

Consideration its past, present and importance in the future, it seems Tangla town is likely to grow more in the coming years ahead. Already, there is less possibility of expansion inside the municipal area; hence expansion will be mainly in the sub-urban areas, located immediately under the direct influence of the town. In this context “Draft Master Plan Tangla - 2041”, had prepared to guide the physical development of the town and its sub urban areas, in future. Tangla town and its neighboring 18 (eighteen) villages namely Tangla Gaon, BorTangla (Part), Rupakhat, Pachim Jangalpara, Pub Jangalpara, Dakhin Jangalpara, Chamuapara, Kharabari, Sastapara, Kukurakata, Dakhin Nalbari, Borjalah, Pachim Nalbari, Pub Nalbari, Uttar Jangalpara, Bancheria, Nalalish, Hahini Gaon have been curved out to get the proposed master plan area for Tangla. The Proposed Draft Master Plan for Tangla, 2041 has been prepared considering different aspects (within the constrain), including transportation aspect, and others those likely to affect activities and land use in the planning area in future. By and large, this plan is prepared as per provision of the URBAN AND REGIONAL DEVELOPMENT PLANS FORMULATION & IMPLEMENTATION (URDPFI) GUIDELINES 2015, prepared by the MINISTRY OF URBAN DEVELOPMENT, GOVT. OF INDIA under the guidance of the Town & Country Planning Organisation and circular issued from time to time by the TCP Department, Govt. of Assam, Uniform Zoning Regulations, The Assam Notified Urban Areas (Other than Guwahati) Building Rules, 2014 are considered as it is already approved for all the towns of Assam including **Tangla Town by the Government of Assam.**

CHAPTER – II DEMOGRAPHY

The study growth of population its composition together with its characteristic is vital in planning a town or a region in order to evolve out planning programme in respect of physical economic and social development in a rational manner.

2.1 GROWTH OF POPULATION

Tangla has grown into a multifunctional town with trade and commerce, as its main activity. Tangla Master Plan Area had a population of 36,716 as per 2011 census and it had a gradual increase. The table shows the population growth of proposed Tangla planning area.

Table No. 2: Population Growth of Tangla Planning Area, 1961 – 2011

Year	Tangla Municipal Area	Male	Fem.	Growth Rate (%)	Planning area minus Municipal area	Male	Fem.	Growth Rate (%)	Tangla Master Plan Area	Growth Rate (%)
1961	4,319	2662	1657	---	5,646	2832	2814	---	9,965	----
1971	9,572	5675	3897	121.62	9,652	5032	4620	70.95	19,224	92.92
1991	15,809	8692	7117	65.16*	16,384	8270	8114	69.7*	32,193	67.46*
2001	18,228	10276	7952	15.30	18,388	9389	8999	12.23	36,616	13.74
2011	17,183	8883	8300	(-)5.73	19,533	9899	9634	6.22	36,716	0.27

* 20 years growth rate.

Sources: Census of India.

The above Table reveals that the rate of growth of population during 1961-71 was considerably high being 92.92%. This is due to migration to the town from its hinterlands obviously for employment opportunities created due to establishment of many Government Offices and other secondary and tertiary activities. The growth of population during 1971-91 was also high i.e. 67.46% (Av.33.73%), the growth of population during 1991-2001 and 2001-2011 were very low compared to other decades i.e. 13.04% and 0.27% per decade only. But as per the census 2011, the rate of growth of population in the Municipal area was negative i.e. (-) 5.73% which was

questionable, might be one of the reasons that in 2001 while census operation had been carried out the outskirt areas of the town were included in the town population. Though the rate of growth of population in the planning area excluding the municipal area was (+) 6.22% during the decade 2001-2011, but the growth rate of population for the entire master plan area was found as just 0.27%.

As per 2011 Census, the Schedule Cast and Schedule Tribe Population in Tangla Municipality was 12.44% and 9.62% of total population respectively and that in entire planning was 14.10% and 26.89% respectively.

2.2 MIGRATION OF POPULATION

It has been seen from the 2011 and 2001 census that Tangla town and villages like Pub Nalbari, Sastrapara, Khoirabari and Chamuapara has shown negative growth rate. This may be because of migration of population either to the new district headquarter Udalguri or other nearby towns or cities for better employment opportunities.

Table No.3: Shows the Tangla town and villages showing negative growth rate in 2001 and 2011

Town/Villages	2001	2011	Difference of population	% of growth
Tangla town	18223	17133	1040	-5.71
Pub Nalbari	527	514	13	-2.46
Sastrapara	1712	1637	75	-4.38
Khoirabari	419	397	22	-5.25
Chamuapara	1720	1603	117	-6.80
Total			1267	

(Sources—Census of India 2001&2011)

2.3 POPULATION DENSITY

According to 2011 census, the gross density of Tangla Municipal area was 5387 persons per Sq. KM. while it was 1166 persons per Sq. Km for the entire planning area. The town registered population density of 5714 persons per Sq. Km in 2001 while it was 1163 persons per Sq. Km in Tangla Master Plan Area. The decreasing density of population in Tangla Municipal area during the decade 2001-2011 was because of the negative growth rate of population in Tangla Municipal area during that decade. The density of population gradually falls as we go away from the town, where population is sparsely distributed with pockets of settlements amidst agricultural land.

2.4 AGE SEX COMPOSITION

According to 2011 Census, the sex ratio i.e. number of female per 1000 males of Tangla town was 934 while the state urban ratio was 958. On the other hand numbers of female per 1000 male in the proposed Master Plan area excluding Municipal area is 973.

2.5 POPULATION PROJECTION UP TO 2041

Considering the past and present growth and development factors, population up to 2041 are projected for Master Plan area and it is given in the table below:

The average decadal growth rates of population in Tangla Municipal area and the Planning area excluding municipal area for the last 4 (four) decades i.e. 1961-1971, 1971-1991, 1991-2001, 2001-2011 have been calculated. The decadal growth rates of population for the next 3 (three) decades have been assumed the average decadal growth rate for the different two areas.

Table No. 4: Population Projection: Tangla Master Plan Area– 2041

Year	Tangla Municipal Area	Growth Rate (%)	Planning area minus Municipal area	Growth Rate (%)	Tangla Master Plan Area	Growth Rate (%)
1961	4319	---	5646	---	9,965	---
1971	9572	121.62	9652	70.95	19,224	92.92
1991	15,809	65.16*	16,384	69.75*	32,193	67.46*
2001	18,228	15.30	18,388	12.23	36,616	13.74
2011	17183	(-)5.73	19,533	6.22	36,716	0.27
2021**	23,884	39.00	25,784	32.00	49,668	35.27
2031**	33,199	39.00	33,519	30.00	66,718	34.32
2041**	46,146	39.00	43,575	30.00	89,721	34.47

* Twenty Year Growth Rate;

** Projected

CHAPTER – III ECONOMIC BASE & EMPLOYMENT

A sound economic base with the optimum use of local and regional resource is a basic requirement for all round development. A small town like Tangla acts as a powerful link between rural settlement and more urbanized centers with regards to collection and distribution of economic inputs of the region and these influence the physical development of the region. The economy of Tangla Town is depends on trade and commerce. As mentioned earlier that historically it was a hub for Indo-Bhutan trade. It got more boost after extension of Rangiya – Tangla Railway line in 1912. Cultivators of nearby villages find a good market to sale their products. Tangla is also surrounded by many tea gardens for which many small and medium scale industries based on tea garden machineries has been set up in the town. Some other industries (Rice & Oil) are also setup based on everyday needs of the public. Thus, it occupies a fairly good position being rich in agriculture especially jute, rice, tea cultivation and forest resources.

Situated in the midst of rice, supari, jute and tea growing areas, service of State Highway No. 4 (Mangaldoi- Bhutiachang road) passing through the town, well connected by Railways and also proximity to Indo-Bhutan border, over the years the Tangla town has been emerged as important trade and commercial center in the north bank of Assam. Tertiary sector dominates the economy of the town. As per 2011 Census functional category of the town belongs to Class III town.

3.1 OCCUPATIONAL PATTERN

Table No. 5: Occupational Pattern of Tangla Master Plan Area (2011)

Sl. no.	Category	No. of workers		
		Outside Municipal Area	Tangla Municipal Area	Total TMPA
I	Main workers	6064	5672	11736
		29.83 %	33.00 %	31.28 %
II	Marginal	1538	557	2095
		7.57%	3.24 %	5.59 %
III	Non workers	12729	10954	23683
		62.60%	63.76 %	63.13 %

Sl. no.	Category	No. of Industrial category of Main workers		
		Outside Municipal Area	Tangla Municipal Area	Total TMPA
I	Cultivators	1413	46	1459
		23.30 %	0.81 %	12.43 %
II	Agricultural labourers	431	25	456
		7.11 %	0.44 %	3.89 %
III	Household Industry workers	461	394	855
		7.60 %	6.95 %	7.28 %
IV	Others	3759	5207	8966
		61.99 %	91.80 %	76.40 %

Sl. no.	Category	No. of Industrial category of Marginal workers		
		Outside Municipal Area	Tangla Municipal Area	Total TMPA
I	Cultivators	404	10	414
		26.27 %	1.80 %	19.76 %
II	Agricultural labourers	486	16	502
		31.60 %	2.87 %	23.96 %
III	Household Industry workers	113	39	152
		7.34 %	7 %	7.26 %
IV	Others	535	492	1027
		34.79 %	88.33 %	49.02 %

Source: Census of India, 2011

As per 2011 census only 63.13% of the total working populations were non worker in Tangla planning Area including Municipal area which shows Tangla needs setting up of industrial and economic activities.

3.2 FORMAL SECTOR

3.2.1 AGRICULTURE

As per 2011 census, only 0.81 per cent of the total main workers were engaged in cultivation in Tangla Municipal Area; but in the planning area, excluding municipal area, it was 23.30 %. Again only 0.44 per cent of the total main workers were agricultural labourers in Tangla Municipal Area; but in the planning area, excluding municipal area, it was 7.11 %. Similarly,

1.80 per cent of the total marginal workers were engaged in cultivation in Tangla Municipal Area; but in the planning area, excluding municipal area, it was 26.27 % and 2.87 per cent of the total marginal workers were agricultural labourers in Tangla Municipal Area; but in the planning area, excluding municipal area, it was 31.60%.

Paddy is the major agricultural commodities produced in the villages within Tangla Master Plan area.

3.2.2 TRADE AND COMMERCE

As per 2011 Census most of the workers were engaged in other category in Tangla Municipal area as well as in Master Plan area, The Household industries found in the planning area are, mainly weaving, embroidery, cutting & tailoring, pickle & juice making, Soap making etc. Manufacturing units found in the planning area are furniture making units, steel fabrication units. The construction units found in the planning area are civil construction units only.

It has already been indicated that Tangla town is a trade and commerce oriented town. The main trade and commercial activities both retail and wholesale have spring up above the State Highway 4 (Mangaldoi-Bhutiachang Road). With the improvement of regional transportation system and increase in population, the field of trade and commerce of Tangla town is expected to increase fast. There is only one big regulatory market which occupies its position in the district of Udalguri as a whole. As per 2011 Census, in House hold industry, 6.95% of main worker were engaged in Tangla Municipal area and that in planning area it was 7.28%.

Three most important commodities exports from the town are rice, Supari, tea, jute and most important commodities imported to the town are sugar, pulses and wheat. About 40% of the total work forces in the town area were directly engaged in the trade and commerce which was revealed from primary survey conducted by T & C P office, Udalguri.

As per census, 2011 the three major manufactured commodities in Tangla town are -1st- Rice Products, 2nd – Soap and 3rd – Flour.

Table No. 6: Tangla Municipal Board Licensed Registered Shop:

Year	Retail shops	Wholesale shops	Total	% of increase of Retail shops	% of increase of wholesale shops
2019-20	4020	138	4158	--	---
2020-21	4074	140	4214	13.43	1.45
2021-22	4108	157	4265	8.34	12.12

Sources: Tangla MB, 2022

There following table shows the villages having weekly / bi-weekly / Daily markets in the planning Area of Tangla Master Plan.

Table No. 7: Daily / Weekly / Market in the planning area

Sl. No.	Town/ Village	Daily / Biweekly/ Weekly
1	Tangla Town	Daily Market (1)
2	Tangla Town	Bi-Weekly Markets (on Tuesday& Friday)
3	Kukurakata	Daily Market

Source: Census of India, 2011 & Field Survey, 2021.

The wholesale trading is mostly concentrated in and around the weekly market of Tangla Town. Wholesale cloth Market, Hardware market, food and food staff market are located on the both sides of SH-4(Mangaldoi - Bhutiachang Road) that passes through the town. The wholesale vegetable markets are found in the daily market of Tangla town.

3.2.3 INDUSTRY

Except a few saw mills, Rice Mills, Nos. of few engineering workshop and Bakery has no such industrial establishment. Since, the Master plan area occupies massive pockets of Govt. land and the region is rich in agriculture and forest the scope for establishment of agro based and forest based industries is wide if those resources are intensively tapped.

As per 2011 Census, only a few worker of Tangla M.B. area were engaged in the industrial activity.

3.2.4 SERVICES

As per 2011 census, 76.40% of the total workers were engaged in others category in the whole planning area out of which a major portion of workers engaged in service sector.

As Tangla has to function as circle head-quarter of Horisinga circle, there is no. of government offices established in the town. Besides the offices a quite no. of educational institutions are found in the planning area and because of all these workers engaged in service sector in the planning area are quite high.

3.3 INFORMAL SECTOR AND URBAN POVERTY ALLEVIATION, INFORMAL TRADE & COMMERCE, TRANSPORT, HOUSEHOLD INDUSTRIES:

Informal sector trade and commercial activities are generally seen in all the urban centers of the state. Tangla Town is also not exception in this respect. Roadside retail shops are found here and there in the municipal area as well as in the planning area especially in the villages near the town. Informal transport has been seen in the form of slow moving vehicles only. A large number of battery rickshaws etc. are playing in the planning area without license. Few household industries are running in the planning area without registration. Weaving, cutting and tailoring, embroidering, doll-making, agarbati making food related items etc. are some of these kind of industries found in the planning area. This informal sector business has been increasing because of urban poverty. Urban poor mainly depend on this type of informal business to day to day earnings.

CHAPTER-IV HOUSING AND SHELTER

4.1 HOUSING CONDITION & SCENARIO

The conditions and scenario of the housing in the proposed Tangla Master plan area given in the table below. As per 2011 census, 48% houses of Tangla Municipal area and 32% houses of proposed Tangla Master Plan area excluding Municipal area are permanent and again the semi-permanent houses in Tangla MB area and in the planning area excluding municipal area are about 49% and 52% of the total houses respectively.

Table No. 8: Type of Dwelling Units, in Proposed T.M.P.A.

Sl. No.	House Type	TMB		TMPA excluding TMB	
		No.	%	No.	%
1.	Permanent	1892	48.01	1314	31.78
2.	Semi Permanent	1945	49.35	2142	51.74
3.	Temporary	91	2.64	684	16.48
Total		3928	100	4140	100

Source: Census, 2011 & assessment made by T & Cp office, Udalguri

The steady influx of population has reflected a new dimension to the socio-economic aspect of housing problem. The slow building construction activities due to high cost of building materials have further aggravated the problem. About 1.8% of the total residential houses are rented. According to 2011 Census, the average size of household in Tangla Municipality area is 4.37 and proposed TMP area excluding TMB area is 4.72 respectively. The Pradhan Mantri Awas Yojana (Urban) has already taken care of the up-gradation of temporary structures of the poor within Tangla town and PMAY (Grameen) has started the same in the villages within villages of proposed master plan area.

4.2 SLUMS-SQUATTERS AND INFORMAL HOUSING SHARE:

There is no any notified slum in Tangla Municipal area and census 2011 reveals that there is practically no shortage of dwelling units in proposed Tangla Master Plan area. However about 3.0% (91) of the existing houses are temporary in TMB area and 17% (684) in the planning area excluding municipal area.

4.3 HOUSING STOCK, SHORTAGE AND NEED ASSESMENT:

As per projected population and existing deficit, housing requirement in the proposed planning area estimated for the year 2041 is about 10600 (i.e. future need for 2041 = $53005 / 5 = 10601$) assuming that the existing deficit will be taken care of through PMAY (U) & (G). . Housing for the needy ones are to be promoted with assistance from the Bank/ HUDCO/ Budgetary assistance and local mobilization of resources in cash or in kind; Upper poverty alleviation scheme, training to be provided to weaker section, they may construct the building, once materials, (locally available) are provided under Govt. sponsored / partly shared scheme; Land Development-Building construction linked scheme is proposed to initiate under HUDCO/ FIs for better off section.

CHAPTER V TRANSPORTATION

5.1. OVER VIEWS OF TRAFFIC AND TRANSPORTATION:

The existence of adequate transportation facility is the prime factor for the socio- economic development of a region. The availability of good serviceable roads is as important as the availability of the other service like water, electricity, drainage etc. Any shortfall in the serviceability of roads immediately results in a great dissatisfaction amongst the citizens. It is, therefore, necessary that the roads in the City Area are designed, constructed and maintained properly. The roads in the city area are constructed by contracting system. Maintenance operation can be broadly divided into two types- preventive maintenance and corrective maintenance.

The S.H.-4(MB Road) which connects Mangaldoi on the South and Paneri and Udalguri on the North plays a vital role throughout the region. Another important road passing through the Tangla town is Udalguri –Tamulpur Road. Tangla railway station is situated in the heart of the town at ward No-2.

5.2 MAJOR ROAD NETWORK:

Some Major roads passing through Tangla town are given below:

1. MB Road (SH-4) connects NH-15 at Mangaldoi in South and SH-10 at Paneri in North.
2. Tangla College road Connecting MB Road (SH-4) at Tangla Town and SH-10 at Horinga.
3. Udalguri-Tamulpur Road or Tangla-Bhergao Road connecting MB Road (SH-4) at Tangla town and SH-11 at Bhergaon.(TB Road)
4. Sipajhar –Tangla Road connects NH-15 at Sipajhar at south and Udalguri-Tamulpur Road at Kukurakata village in North.
5. Tangla—Deor Road Connects MB Road(SH-4) in Tangla Town at ward No-4.

5.3. MAJOR TRAFFIC NODES (AREA OF CONGESTION)**Table No. 9: Major Traffic Nodes in the Planning Area**

<u>Location</u>	<u>Road junctions</u>	<u>Description</u>
Ward No.2&4	Junction of MB Road, TB Road and Tangla-Deor Road	Entry to the daily markets and bi weekly market areas, Horisinga circle office etc.
Ward No. 2	Junction of MB Road and Tangla college Road	Entry to Bus stand, Tempo stand etc.
Ward No. 2	Railway Crossing of MB Road	Around 24 Nos of passenger trains passing through Tangla and among them 10 Nos are daily trains.
Ward No. 3	Junction of Civil Hospital Road and TB Road	Entry to Civil hospital of Tangla
Kukurakata Gaon	Junction of Tangla-Sipajar Road and T B Road	Daily market of Kukurakata gaon
Kukurakata Gaon	Railway Crossing of TB Road	Around 24 Nos. of passenger trains passing through Tangla and among them 10 Nos. are daily trains.

For decongestion of following areas (Junctions) following measures should be taken.

1. MB Road should be widen from No.1 Aliakash village in north to Pub-jangalpara village at south with a railway over bridge at railway crossing point at ward No-2 by covering all the above traffic junctions of ward No.2 and ward No.4.
2. TB Road should be widening from MB Road Junction to Tangla gaon village with a railway over bridge in the railway crossing at Kukurakata Village.

5.4. TRANSPORT TERMINALS:

As per the information collected from the different transport association of Tangla approximately 31 buses , including big buses and mini buses(609/709 etc) are running from Tangla town and around 500 Nos. of DI/ Mahindra pickup vans, Wingers, Tata magics are running in Tangla town.

As per 2011,census total car/ Jeep/van available in Tangla town was 251 Nos, Scooter /

Motorcycle / Moped was 678Nos, and cycle was 2510 Nos. TMB has registered 93Nos of Battery rickshaws up to 2021-22 and many battery rickshaws are running in the village areas without any registration.

Table No. 10: Major Transport Terminals of Tangla

Terminal Center	Location	Observation
-----A.		
Inter-City/hinterland	Bus-Station	

1. Passenger	i) Public Bus-Stand	- Over crowded - On railway Land - Un planned, No waiting shed/Toilet - Located at Tangla college Road
2. Goods	i) Truck Stand	- No Organised stand - Roadside truck parking
-----A.		
Inter-City/ hinterland	Vehicle Stand	

1. Passenger	i) Auto/Tempo/ Battery Rickshaw Stand	- On Railway land. - Unplanned without any Waiting shed/ toilet facilities.

It has been seen that there is no any organized parking area in Tangla for buses, trucks and other public and private vehicles. Tangla Municipality Board has taken a decision to construct transport terminus in a 14 bighas of land in ward no-2. Some existing municipal road should be developed for that.

5.5. RAILWAYS

Railways is one of the prime mode of transportation For Tangla and it's surrounding areas. Tangla railway station is situated at the heart of the Tangla town and around 24 passengers trains along with the goods train is passing through Tangla town. Some important passengers trains passing through Tangla Town are shown below :

Table No.11. Passenger Trains Passing through Tangla.

Sl. No.	Name of the trains	Days of operation
1	Naharlagun----- Guwahati	Daily
2	Murkongselek-----Guwahati	Daily
3	Dibrugarh----- New Delhi Rajdhani Express	Tuesday & Saturday
4	New Tinsukia---Puri Special	Monday
5	Rangapara North---Rangiya Passanger	Daily
6	Kamrup Express(Via Bogibil)	Monday & Friday
7	New Tinsukia Superfast Special	Tuesday
8	Dekargaon----- Guwahati ,Intercity	Daily
9	Naharlagun-----Guwahati,Satabdi Express	Monday,Tuesday,Friday
10	Dakargaon---Rangiya Passanger	Daily

5.6. FOOTPATH

As per the report of Tangla Municipal Board around 4.5 K.M covered drain along with foot path has been already constructed in Municipal area. Some drains and foot path are also constructed by PWD in Tangla –Sipajhar Road at Kukurakata and Rupakhat villages.

5.7. CONDITION OF ROADS:**Table No. 12: Condition of Municipal Road in Tangla Municipality, 2021**

Sl. No.	Types of Road	Existing Length(in Km)	Proposed Length (In Km)	Total Length (In Km)
1	Bituminous Road	5.20	0.000	5.200
2	C.C Block pavers	11.262	13.955	25.217
3	Graveled Road	6.105	0.000	6.105
4	Earthen Road	7.850	0.000	7.85
Total		30.417	13.955	44.372

Source: Tangla Municipal Board

5.8 PROPOSED WIDTH OF THE ROAD/CIRCULATION

Proposed growth and functioning of any area and its efficient management is very much dependent on the circulation pattern and it is vital part of the whole physical plan. The proposed circulation pattern envisages effective linkage within the region and direct linkages between different areas and functionally interrelated uses for easy accessibility. Following is the hierarchical classification of roads (Minimum Width);

- a) SH- 4(MB Road)- width **23.5m**
- b) Major roads that will cater major movements between areas- **9.0m**
- c) Minor roads or secondary distributors will distribute traffic within each area-**7.5m**
- d) Local access road will carry traffic to each locality and lead to individual- **6.0m**

CHAPTER-VI INFRASTRUCTURE

6.1 PHYSICAL INFRASTRUCTURE

6.1.1 WATER SUPPLY

At present there is no Treated Tape water facility is available in Tangla Municipal area. Both 110MLD and 118MLD water supply schemes are not functional for a long time. So the entire Municipal area is depend on Tube well, Borehole, Uncovered well for the source of water. (Source: TMB, Census 2011)

As per census, 2011 households of Pub jangalpara, Hahini Gaon, No1 alikash, Chamuapara, Uttar Jangalpara, Kukurakata, Tanglagaon, Bor-Tangla, Rupakhat, Pub Nalbari, Pachim Nalbari, Borjalah, and Dakhin Nalbari are found having treated tap water. Households of the villages within the Tangla Master Plan area mainly use Hand pumps/ tube wells and Bore holes. All the villages within Tangla Master Plan area is going to cover under Jal Jeevan Mission which will cater all houses with tap water connections.

6.1.2 DRAINAGE & SEWERAGE

Tangla Town has practically no storm water drainage system and sewerage system. Like many other towns in Assam, during rainy season low lying areas are water lodged whenever there is a heavy shower. The most of the drainage system of this town are both open and closed drains. In residential areas the roadside drains are found often blocked which aggravates the situation worse. In order to keep the town free from water logging a drainage system should be planned and the stream flowing through the area should be utilized for this purpose.

River Nanoi and two natural streams Naika and Ghoga are flowing through the proposed planning area and they are responsible for drain out the major portion of storm water of Master Plan area.

Table No 13 - Statement of the Present status and length of Drain in Tangla Municipal Area:

Sl. No.	Type of Drains	Existing Length (in Km)	Proposed Length (in Km)	Total Length (in Km)
1	RCC Cannel	0.00	7.052	7.052
2	RCC covered drain	4.547	0.000	4.547
3	RCC Drain	3.873	0.000	3.873
4	Kucha Drain	17.596	0.000	17.596
5	Cannel Kucha	7.052	0.000	-
	Total			33.068

(Source : TMB)

As in other towns of Assam, Tangla town and its neighboring villages do not have sewerage network. People in the planning area depend on septic tank with soak pit and/ or pit latrine. As per 2011 census there are 2357 nos. flush latrines, 1072 pit latrines, 76 service latrines and 19 other latrines within Tangla town. The all villages within proposed Tangla Master Plan area are under Total Sanitation Campaign. No community toilet with or without bathrooms are found in any village within proposed Master Plan area.

6.1.3 MUNICIPAL SOLID WASTE MANAGEMENT

Tangla Municipal Board has no earmarked own Dumping Ground. The Tangla Municipality with the help of 2 Nos. of Tractor/Tailors one cess- pull cleaner and 10 Nos. of thelas and with the help of 17 Nos. of safai workers disposed of around 2.3 ton per day of solid waste in various low laying pockets of the town and road sides. It has been seen that most of the solid waste is absorbed naturally in various low-lying pockets. There is an urgent need of a suitable site for solid waste disposal for Tangla Municipal board.

As per TMB report out of 4000 household ,only 765Nos household are covered by door to door garbage collection and out of 1250 commercial establishments , 990 are covered by garbage collection.

Table No-14 shows the total waste generated, collected and processed by Tangla Municipal Board.

Total generated(TPD)		Total collected(TPD)		Total Processed(TPD)	
Wet waste	1.64	Wet waste	1.12	Wet waste	0.31
Dry waste	0.68	Dry waste	0.47	Dry waste	0.25
Plastic waste	0.32	Plastic waste	0.21	Plastic waste	0.14
Mix waste	0.89	Mix waste	0.49		
Total	3.53	Total	2.29	Total	0.7

(Source: Tangla Municipal Board)

From the above table it has been seen that daily more than 1.20ton garbage is not collected by TMB.

An area of approximately 6675 Sq. m (i.e. 5 bighas) has been selected for dumping ground near to the crematorium at ward no-1 which will be sufficient for the entire planning area. The approach road and the boundary wall and other scientific approaches as per hon'ble NGT guidelines will have to be taken care of while implementing the same.

In the villages of Tangla Master Plan area there is no any system of solid waste collection and dumping.

6.1.4 POWER AND ENERGY

Assam State Electricity Board (ASEB) is the only source of power supply to the entire proposed Planning Area of Tangla. 132 KV Grid Sub-Station at Chamuapara village is the sources of power supply in proposed Tangla Master plan area. There are 73 nos. of industrial consumers, 809 nos. of commercial consumers, 3162 Nos. of domestic consumers and 200 Nos. of street light point were facilitated in Tangla town. (Source: Census of India, 2011)

6.1.5 HEALTH

Within Tangla Municipality at ward no-3, there is a 30 (thirty) bedded Govt. hospital named by Kalaguru Bishnu Rabha Hospital with 4 nos. doctor and 10 para-medical staff. There is also a Maternity home in Tangla town with 7 nos. of beds. In Sastrapata village there is a charitable non govt. hospital with 2 nos. of MBBS doctors. There is no any Veterinary hospital in Tangla and nearest Veterinary hospital is at Kalaigaon, 22K.M away. (Source: Census of India, 2011)

No any private nursing home in Tangla town and one private medical clinic named by Medi Health Care situated at TB Road at ward No.1.

The nearest Govt. medical college is AIIMS, Guwahati, which is around 85 K.M. away from Tangla Town.

It is necessary to upgrade the present Govt. Hospital to minimum 100 bedded Hospital to serve entire Tangla Master Plan area and surrounding villages.

6.1.6 POLICE PROTECTION FIRE PROTECTION

At Tangla Town, there is one Police Station namely TANGLA POLICE STATION. The whole planning area covers under the control of the Tangla Police Station.

Moreover, Central Reserved Police Force or Indian Army's Company are generally kept at the Industrial Estate to safeguard the people of the entire planning area from bad elements of the society.

There is a fire fighting unit office at Tangla under the Directorate of Fire Services, Assam, which serves the entire planning area.

6.1.7. CREMATION GROUNDS AND GRAVE-YARDS

There is one cremation ground within Tangla Municipal limit. There are two grave yards at Tangla town, one for Muslims and other for Christians. In the planning area there is no organized cremation ground or grave yard. Hindu people in the planning area generally use their own land for this purpose and Muslim/Christian people come to Tangla Municipality's grave yard.

6.2 SOCIAL INFRASTRUCTURE

6.2.1 EDUCATION

The total literacy rate of Tangla town was 78.17% in 2011 which is greater than average literacy rate 72.19% of Assam. Population-wise, out of total 13433 literates, males were 7,245 while females were 6,188. Also the male literacy rate was 81.56% and the female literacy rate was 74.55% in Tangla town and that the percentage within Master Plan Area excluding municipal area was 66.33% and the male and female literacy rates were 74.36% and 62.21% respectively.

Table No. 15: Literary Rate in TMB, TMPA with comparison to State and National:

Sex	Tangla Town	Tangla MPA excluding TMB	Tangla MPA	Assam	India
Male	81.56%	74.36%	77.83%	77.9%	80.9%
Female	74.55%	62.21%	68.02%	66.3%	64.6%
Total	78.17%	66.3%.	71.86%	72.2%	73.0%

Source: Census of India, 2011

The distribution of educational institution within the Tangla Planning areas is given in below:

Table No. 16: Educational Institution in the Tangla Master Plan Area:

Sl. No.	Category	No. of Institutions					
		Within Tangla MB		Within TMP excluding TMB		Total	
		Govt.	Pvt.	Govt.	Pvt.	Govt.	Pvt.
1.	Primary School	13	1	22	4	35	5
2.	M. E./ M. V. School	7	2	16	1	23	3
3.	High School	9	1	1	2	10	1
4.	Higher Secondary School	3	1	0	0	3	1
5.	Junior College	0	3	0	1	0	4
6.	College	1	1	0	0	1	1
Total		34	9	39	8	72	17

Source: Census, 2011 & Primary Survey, 2021

The Tangla College, which was established in 1970, has Arts, Science and Commerce stream is the main education centre of Tangla region for degree level studies and the other private degree college offers only Arts stream.

There are 2 nos. of English Medium High schools namely Donbosco High school, Tangla and Auxillium Convent High school, Tangla are located in the Pachim Nalbari and Sastapara village respectively in the proposed Master plan area. There is one teacher Training College namely R.C. Saharia Teacher's Training College in the Tangla Town. There are numbers of Junior colleges in the proposed Master Plan area namely North Darrang College, National Pioneer College, Arunodi Junior College, Presidency College etc.

6.2.2 SOCIAL AND CULTURAL INSTITUTIONS

Tangla is well advance in social and cultural activities. Two Cinema Halls in the proposed planning area are the important entertaining centers. Tangla Town has (Three) nos. municipal Auditorium / Community Hall. Bordoloi Bhawan at ward No-2 and another community hall is at ward No-1. The renovation work of Bordoloi Bhawan is going on by TMB from 5th finance fund.

CHAPTER VII - ENVIRONMENT AND CITY BEAUTIFICATION PLAN

7.1. ECO-FRIENDLY AREAS

In present town or city planning most emphasis must be given to the eco-friendly areas for mitigation of global warming and to reduce the impact of pollution by providing better air quality to the citizen.

All the water bodies and low lying areas parks, playgrounds ,forest areas, tea garden areas of the proposed Tangla Master area is considered as the eco-friendly areas for planning areas. Now in proposed Tangla master plan area there is only one organized park in Tangla college area at Pub Nalbari village which is maintained by Tangla college authority. There are many vacant govt. land in both the banks of river Nanoi in the villages Khoirabari, Kukurakata, Dakhin Nalbari, Rupakhat etc. All the major Govt. schools and college has their own play grounds. Tangla college play ground at Pub-Nalbari village and Tangla Higher secondary school play ground at MB Road in Borjalah village. There is a mini stadium in proposed master plan area at Borjalah village.

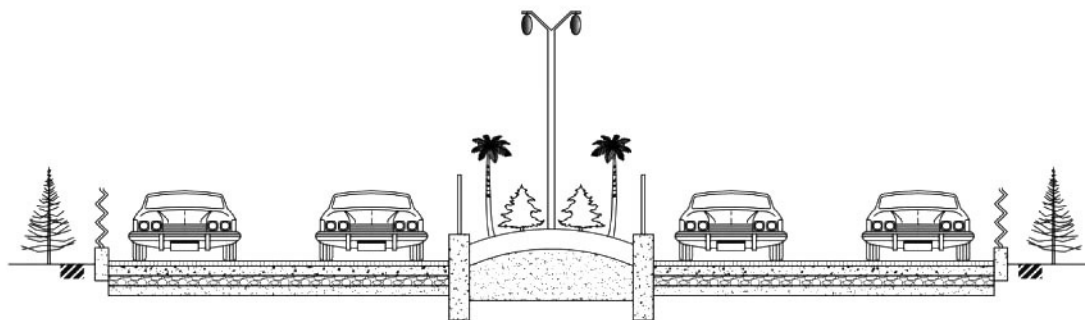
7.2. PLAN/MEASURES FOR PROTECTION AND CONSERVATION OF ENVIROMENTALLY -FRIENDLY ZONES

The vacant lands beside the river Nanoi are marked as green belt zone and any human habitation and other construction activities are restricted accordingly. An area of .93 Sq.Km. is marked as green belt zone in the entire master plan area which is 2.95% of total area.

7.3. CITY BEAUTIFICATION PLAN PROPOSAL

It has been mentioned that there is no any organized parks maintained by Tangla Municipal Board. Now Tangla municipality has taken a decision to develop a around 5,607 Sq. m (4 bighas 1 katha) area of ward no- 4 to a children park by developing the existing pond on and also to be developed as recreational centers with all modern facilities as per national standard. All the modern children playing equipments will be placed in the Children Park along with the water sports facilities. A River front development project has been proposed to take up at ward 1 and 3 beside the river Nanoi.

Another beautification plan is to widening of MB Road with dividers in between where plantation must be done along with the street lights which will create a good look to the entire town.



Section of proposed widening of MB Road

CHAPTER-VIII LAND USE PLAN

8.1 EXISTING PHYSICAL CONDITION

As per 2011 Census of India, the total land area within the Proposed Tangla Draft master Plan was 31.46 Sq. Km which is almost equal to area as derived from the map prepared from the cadastral maps those were collected from revenue department which is 31.57 Sq.Km.

Table No.17: TOWN/ VILLAGE WISE GEOGRAPHICAL AREA WITHIN PROPOSED MASTER PLAN FOR TANGLA AS PER 2011 CENSUS

Town / Village Name	Total Geographical Area (in Sq. Km.)
Tangla MB	3.19
Hahini Gaon	3.06
No. 1 Aliakash	0.72
Bancheria	1.04
UttarJangalpara	1.78
Pub Nalbari	0.46
Pachim Nalbari	1.04
Borjalah	1.20
Dakhin Nalbari	0.60
Kukurakata	2.08
Sastrapara	2.99
Khorabari	1.25
Dakhin Jangalpara	1.15
Chamuapara	2.37
Pub Jangalpara	1.45
Pachim Jangalpara	0.79
Tangla Gaon	3.46
Rupakhat	1.19
BorTangla(Part)	1.64
Total	31.46

One of the fundamentals of planning process is to know the existing uses of land. It has already been indicated that Tangla town is of recent origin where in ribbon type development along the major road have come up in a haphazard manner. Gradually, with the growth of commercial activities, urban expansion has been taking place. Therefore, to provide a coherent land use pattern for future development it has been studied as follows.

Table No.18: Existing Land Use for proposed Draft Tangla Master Plan Area:

Land Use		Area in Sq. Km	% to Developed Area	% to Master Plan Area
1. Residential		10.04	72.13	31.80
2. Commercial		0.43	3.09	1.36
3. Industrial		0.02	0.14	0.05
4. Public & Semi Public		0.75	5.39	2.37
5. Transportation	Road 0.80	1.17	8.40	3.71
	Railways 0.37			
6. Recreational & Open Space		1.52	10.85	4.78
Total Developed Area		13.93	100.00	
7. Water Bodies		1.76		5.61
8. Agricultural				
(i) Tea Garden		0.06		0.19
(ii) Other Agricultural		15.82		50.13
Total Master Plan Area		31.57		100.00

Source: Survey Conducted by Town & Country Planning, Udalguri, 2021

The above table depicts the land use distribution in the Proposed Tangla Planning area and the percentage of area covered by each type of land use. The residential use continues to be the major land use within the town and its immediate outskirts, while the villages within the master plan area are predominantly covered by paddy fields.

8.2 PROPOSED PHYSICAL PLAN: CONCEPT AND PROPOSAL

8.2.1 SCOPE OF DEVELOPMENT

The scope of development of the proposed Tangla Master Plan area is expected to be guided by the following factors:

- i) Development activities in the Tangla Town and trading and transport activities and others functions like administration, education and culture and industrial activities;
- ii) Vast vacant land within the master plan area.

Before going to propose the required land uses in the Tangla master plan area, the availability of Government vacant land had been searched at local land revenue office which was quite tedious and after no. of attempts the few vacant Govt. land had been found. On the basis estimated population and functional requirement, future trend of growth, suitability of land for development and availability of government vacant land; a land use plan is prepared for the Master Plan Area to guide the future physical development.

8.2.2 PROPOSED LAND USE PLAN:

The proposed land use plan is prepared based on the following consideration:

- i) Minimum dislocation of the present land use path
- ii) The trend of natural growth pattern of the village
- iii) Inter- relationship of various land use classification
- iv) Possible spill over of the various activities from Tangla Town.

Table No. 19: Proposed Land Use for Draft Tangla Master Plan Area – 2041:

Land use Category	Area in Sq. Km.	% to developed area	% to total Master Plan Area
1. Residential	12.21	75.94	38.70
1.1 Low density	5.10		
1.2 Medium density	4.62		
1.3 High density	2.49		
2. Commercial	0.92	5.72	2.91
3. Industrial	0.10	0.61	0.33
3.1 Light	0.056		
3.2 Medium	0.047		
4. Public & Semi Public	0.78	4.85	2.47
5. Recreational & Open Space	0.70	4.36	2.21
6. Transportation	1.17	7.28	3.70
7. Composite use	0.20	1.24	0.63
Total Developed Area	16.08	100.00	
8. Water Bodies	1.78		5.64
9. Tea Garden	0.06		0.19
10. Agricultural	12.71		40.28
11. Green Belt	0.93		2.95
Total Master Plan Area	31.57		100.00

8.2.2.1 RESIDENTIAL USE: An area of 12.21 Sq. Km of land are proposed for Residential use and divided in to three zones- High, Medium & Low; However in course of time Residential Land Development are to be taken up for planned development along with basic infrastructure; main residential areas are proposed in the normal expansion of existing villages along with emerging development corridor. An area of 5 bighas(approx.) is proposed for EWS housing at Dakhin Nalbari village (Dag No. 188and 189).

8.2.2.2 COMMERCIAL USE: An area of 0.92 Sq. Km is proposed under commercial use; whole sale and retail activities. Tangla town market will dominate the trading activities and the weekly market will dominate the wholesale trading. New commercial areas are proposed along the main transport corridors especially in MB road and TB road.

8.2.2.3 INDUSTRIAL USE: An area of 0.10 Sq. Km. are proposed for industrial development under three categories; light, medium; Industrial areas are proposed in kukurakata , uttar jangalpara and NO. 1 Aliakask villages .

8.2.2.4 PUBLIC & SEMIPUBLIC USE: An area of 0.78 Sq. Km. of land is proposed under public and semipublic use. New office/ institution complexes are proposed to construct in the ward no -4 by rationalizing the area of the present Horisinga circle office and other Govt. offices surrounding it like PWD office. There is a land area of around 30 bighas from Dag no- 884 to 895 combining those office premises.

8.2.2.5 RECREATIONAL AND OPEN SPACE: An area of 0.70 Sq. Km. of land is proposed under this category. All play ground and other open land of TMB area and other villages of proposed Tangla Master Plan may be reserved as recreational and open space. Mini stadium of Tangla at Borjalah village may be converted to a sports complex with all modern facilities.

8.2.2.6 TRANSPORT & COMMUNICATION: An area of 1.17 Sq. Km. of land is proposed under transport and communication. All major roads within the planning area are to be widened; and improved; missing link, if any is proposed for development to bring the road network efficiency.

8.2.2.7 AGRICULTURAL USE: An area of 12.71 Sq. Km. of land is proposed for agriculture use. These areas may provide vegetables and perishable requirement to the planning area; economic program may be initiated in phases for urban cultivation in course.

8.2.2.8 GREEN BELT: An area of 0.93 Sq. Km. is proposed under Green Belt Zone. Maximum green belt are proposed beside the river Nanai.

8.2.2.9 COMPOSITE USE: An area of 0.20 Sq.Km. is composite use and both residential and commercial and other uses are allowed in that zone.

The Drainage Master Plan for Tangla will be prepared by Drainage & Sewerage Division, Guwahati, and Town & Country Planning Assam.

The Sewerage Network Plan will be prepared by Drainage & Sewerage Division, Guwahati, Town & Country Planning Assam, STP site has been proposed within the area earmarked for solid waste management.

All the households within entire Tangla Master Plan area will have pipe water supply connection under Jal Jeevan Mission (Urban) & Rural.

8.3 PROTECTION OF ECONOMIC BASE AND EMPLOYMENT

Planners are concerned with the likely demands of land development for various economic activities, the possible location of these activities within a city or city regions; the broad relationship between these activities and the scale and timing of migration into and out of the area; Formal sector trading is to be promoted in the planning areas by providing necessary financial assistance from bank and training; Industrial activities and trading and services will provide income and employment; For weaker section care to be taken to provide employment and basic services under poverty alleviation scheme; Labor localities that have come up in the sub urban villages, in the planning area deserve special attention; Horticulture, Fisheries Diary and Poultry activities to be promoted in the planning area to provide local needs and export to other urban centers where there are sufficient demand.

8.4 ENFORCEMENT OF MASTER PLAN

The proposed master plan once approved and adopted by the Govt. of Assam, will be enforced by a Development Authority to be created under Assam Town & Country Planning Act, 1959 (as amended) for the villages included in the Master Plan and Tangla Municipality for the municipal area with the provisions of Uniform Zoning Regulations & The Assam Notified Urban Areas (Other than Guwahati) Building Rules, 2014 already approved by the Govt. of Assam.

CHAPTER IX PROPOSED PROJECT'S BRIEF AND TENTATIVE FUNDING SOURCE

9.1. MAJOR PROJECTS REQUIRMENT FOR PLANNING AREA

Based on the existing conditions different projects are to be required to fulfill the basic needs and also to enhance the quality of the life for the population of proposed Tangla Master Plan area.

Table No-20: Shows the name of some required projects in different sectors :

Sl. No.	Sector	Names of the required Projects
1	Housing & Shelter	EWS housing projects
2	Transportation	Transport terminals, widening and developments of roads, construction of over bridge,
3	Infrastructure	Construction of Drains, improvement of public auditorium, improvement of Solid waste disposal ground and installation of waste treatment plant.
4	Environment and city Beautification plan	Improvements of parks, Riverfront development, street light etc.

9.2. TENTAIVE FUND REQUIRE MENT AND SOURCE OF FUND

Table No-21: Shows the tentative source of fund and amount required :

Sl. No.	Name of the major required projects	Name of fund/Source of Fund(Tentative)	Tentative Amount (in cores)
1.	EWS Housing	PMAY(U)	40.00
2.	Transport Terminal	NLCPR/NEC	60.00
3.	R O Bs at railway crossing of MB road and TB road(2 Nos)	NLCPR/NEC/SOPD/Rail way	130.00
4.	Widening of MB Road,TB Road	SOPD	10.00
5.	Construction of Drains	SOPD/ Fifteen finance	15.50
6	Improvement of solid waste disposal site and installment of waste treatment plant	SBM fund	5.00
7	Construction of parks/riverfront development	NLCPR/NEC/SOPD	20.00

9.3. IDENTIFICATION OF LAND SITE FOR PROPOSAL

A land area 5 bighas is proposed in Dakhin Nalbari area (Dag No, 188, 189) for the proposed EWS housing scheme at by Tangla Municipal Board .The proposed transport terminal site will be at the area of bi weekly market which is run by TMB. The total land area for transport terminal is 12 bighas 1katha 4lessas at Dag No.879 of ward No.-4.The proposed solid waste treatment site is at ward No-1.An area of 5 bighas vacant land may be proposed for solid waste treatment site near existing crematorium.TMB has also proposed children park at ward no-4 in an area of around 4bighas 19 lessas of land (Dag No.-882 and 883) .The river front Development project may be proposed at ward no. 1 and 3.

CHAPTER – X DISASTER MANAGEMENT PLAN FOR TANGLA MASTER PLAN AREA

10.1 NEED FOR DISASTER MANAGEMENT:

Tangla falls under Seismic Zone V and witnessed two major earthquakes in the region. The Assam-Tibet Earthquake of 1950 measuring 8.6 in the Richter scale was the worst felt earthquake in the district and nearly 4800 people lost their life in the state. With increased density of urban population over the period combined with haphazard growth the risk from earthquake has increased manifold. Data on disaster occurrence, its effect upon people and its cost to countries, are primary inputs to analyze the temporal and geographical trends in disaster impact. Disaster losses, provide the basis for identifying where, and to what extent, the potentially negative outcomes embedded in the concept of risk is realized. They help to understand where, and to whom, disaster risk becomes impact. They also provide the basis for risk assessment processes, a departing point for the application of disaster reduction measures.

Development cannot be sustainable unless disaster mitigation is built into development process. Investments in mitigation are more cost effective than expenditure on relief and rehabilitation. Prevention and mitigation contribute to lasting improvement in safety and are essential to integrated disaster management. Disaster response alone is not sufficient as it yields only temporary results at very high cost. So emphasis must be on Disaster prevention, mitigation and preparedness, which help in achieving objectivity of vulnerability reduction.

As per Section 40 of Disaster Management Act 2005 that every department of the State Government shall prepare a Disaster Management Plan.

10.2 IMPORTANCE OF PUTTING DISASTER MANAGEMENT PLANS IN PLACE:

Disasters are events that have a huge impact on humans and/or the environment. Disasters require government intervention. They are not always unpredictable. Floods take place in valleys and flood plains, droughts in areas with unstable and low rainfall, and oil spills happen in shipping lanes. This predictability provides opportunities to plan for, prevent and to lessen the impact of disasters.

Disasters arise from both natural and human causes, and the responses needed could stretch community and government capacity to the limit. Disasters are inevitable although we do not always know when and where they will happen. But their worst effects can be partially or completely prevented by preparation, early warning, and swift, decisive responses.

Disaster management aims to reduce the occurrence of disasters and to reduce the impact of those that cannot be prevented. The government White paper and Act on Disaster Management define the roles of Local Authorities as well as Provincial and National government in disaster management.

North East Region has been vulnerable to many disasters in the past both natural and manmade, we can notice that most of the disasters have occurred within the last two decades, and the frequency, intensity and magnitude of the disasters are ever increasing.

10.3 PLAN OBJECTIVES

The objectives of the District Disaster Management Plan are:

- Disaster management in the routine affairs of the department.
- To provide technical and humanitarian assistance during disaster.
- Prompt and effective discharge of departmental responsibilities during disaster situations
- Ensuring safety of departmental infrastructure, human resource and other assets
- Ensuring safety of the beneficiaries and others
- Speedy restoration after disaster impact
- To conduct trainings and capacity building for effective prevention, mitigation and response for disasters.
- To undertake information, education and communication activities to create awareness among the communities and the general public.

10.4 DISASTER MANAGEMENT CYCLE:

In multi-hazard response plan, the disaster management cycle has a significant role to play. The four stages of disaster cycle have their own importance in terms of their implementation during, after and before the occurrence of any disaster.

Pre disaster activities

1. Policy development and National, State, district, local level disaster organization formation
2. Vulnerability and capacity assessment.
3. Prevention and mitigation
4. Preparedness, planning and training

Emergency activities

1. Warning (beginning before the actual event)
2. Evacuation, search and rescue
3. Emergency assistance (relief) – food, water, shelter, medical aid

Post disaster activities

1. Repair and restoration of life lines (power, telecommunications, water transportation)
2. Reconstruction and rehabilitation.

10.5 PROFILE OF THE DEPARTMENT: -

This is a municipal office under the Director, Municipal Administration, Dispur, Guwahati-6 (Department of Housing & Urban Affairs). The office is situated at Tangla town in ward no- 2 .

1) Departmental works:

-Implementation of schemes related to Central and State Govt. fund for infrastructure development.

-Cleaning and scientific dumping and management of waste generated in the town

2) Office Building:-

It is a G+4 belongs to Tangla Municipality.(Ground floor Parking)

Location-Ward No.2

10.6 CLASSIFICATION OF HAZARDS:

The High Power Committee of the Govt. of India has classified the hazards as follows-

1. Water and Climate Related	<ul style="list-style-type: none"> • Floods and Drainage management • Cyclones • Tornadoes & Hurricanes • Hailstorm • Cloud burst • Snow Avalanches • Heat & cold Waves • Thunder & Lightning • Sea Erosion • Droughts
2. Geological Related	<ul style="list-style-type: none"> • Earthquakes • Landslides & Mudflows • Dam Bursts & Dam Failures • Mine Fires
3. Chemical Industrial and Nuclear Related	<ul style="list-style-type: none"> • Chemical and Industrial Disasters • Nuclear Disasters
4. Accident Related	<ul style="list-style-type: none"> • Road, Rail and other Transportation accidents including Waterways • Mine Flooding • Major Building Collapse • Serial Bomb Blasts • Festival Related Disasters • Urban Fires • Oil Spill • Village Fires • Boat Capsizing • Forest Fires • Electrical Disasters & Fires
5. Biological related	<ul style="list-style-type: none"> • Biological Disaster & Epidemics • Flood Poisoning • Cattle Epidemics • Pest Attacks

10.7 HAZARDS SPECIFIC PRONENESS IN TANGLA

VULNERABILITY ANALYSIS OF TANGLA

➤ **Earthquake :-**

As per the latest seismic zoning map of India, the **Tangla (Udalguri District)** falls under High Risk Zone- V, where a maximum intensity of IX can be expected.

➤ **Flood :-**

The general reason of occurrence of flood in Udalguri District is due to overflow of river Dhansiri, Noa etc and its tributaries. Tangla Master plan area faces urban flooding due to artificial reduction/blocking of Cross section of Drains and also over flooding of river Nanoi and Naika and two natural streams Naika and Ghoga which are flowing through the proposed Master Plan area of Tangla.

➤ **Soil Erosion :-**

The soil erosion at the embankment of Dhansri river is major threat to many places in Udalguri District.

➤ **Fires :-**

The fire takes places in Udalguri District due to short circuit in commercial areas. Mainly fire takes place from March to April when the climate remains very dry and probability is more instance of fire breakout. The towns in the district are also prone to industrial disaster due to having some manufacturing industrial plants in many parts.

➤ **Cyclone:-**

In Udalguri District cases related to low density cyclone occurred in some places.

10.8 SEASONAL CALENDAR FOR DIFFERENT TYPES OF HAZARDS:

Sl. No.	Type	Hazard												Remarks
		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	
1	Flood						←			→				
2	Earthquake	←												→
3	Fire	←												→
4	Landslide						←			→				
5	Cyclone				←					→				
6	Erosion				←					→				
7	Epidemic				←					→				
8	Accident	←												→
9	Riot	←												→

10.9 Likely Geographical extent and magnitude / severity:

- 1) Assam as a whole is within the Zone V of earthquake zone. Especially Tangla has witnessed a devastating earthquake in 1950. So, it can be said that geographically and geologically Tangla is situated in a very hazards prone zone in the context of earthquake.
- 2) Chances of Landslide are comparatively less in this district. But fire can break out in the congested residential and commercial areas, markets of the town anytime during lean season, so is the risk of epidemic in the slum/basti areas. The district has faced cyclones several times in the past. Road accident, rail accident, collapse of multi-storied buildings etc. may occur at any time; of course communal/ other riot is not so common in this district.

10.10 Preparedness & Response System

Department	Response System			
	Preparedness	Pre (after Warning)	During Disaster	Post Disaster
Tangla MB	<ul style="list-style-type: none"> Capacity building (training) and sensitization among departmental official & staff Assessment of existing departmental building & other hazard's. Identification of vulnerable building (Safety Audit) in towns and necessary direction to Urban local Body's for necessary action Evacuation Plan in high rise and life line building 	<p>Pre preparedness in case of a disaster like flood. Earthquake etc., collection of some construction materials like bamboo, rope, wire, wood, sand, cement bags, First Aid kit etc., will be kept ready.</p> <p>Coordination with District Disaster Management Authority</p> <p>Dissemination of information for early warning to general public with the aegis of DDMA .</p>	<p>During disaster this department will provide technical manpower support to restore essential services and coordinate with DDMA</p>	<p>After the disaster this department will make assessment of destruction and report to District Admin.</p> <p>Identification of rehabilitation site</p> <p>Modification of Master Plan</p> <p>Preparation of any new Master Plan for affected areas.</p>

Prevention & Mitigation Plan –

Proper implementation and enforcement of Assam Notified Urban Area Building Rules – 2014 & Sensitization among stakeholders engaged for construction work / owners to use disaster resistant technologies

10.11 Standard Operating Procedure (SOP):

- ❖ Written guideline that precisely defines how operations are to be carried out.
- ❖ An organizational directive that establishes a standard course of action.
- ❖ Written guidelines that explain what is expected and required of the personnel.
- ❖ Standardization of activities :-
 - Identify planned and agreed upon roles & actions.
 - Promotes coordination and communication amongst personnel.
 - Simplify decision making during potentially stressful conditions)

10.11.1. Emergency Support Function (ESF):

1.	NAME OF HEAD	EXECUTIVE OFFICER, TANGLA MB; MOBILE No:-	NODEL OFFICER (EXECUTION OF SOP)
2.		ASST. ENGINEER, TANGLA MB; MOBILE No:-	EXECUTION OF SOP & SUPERVISION OF ESF 1 & 2

10.11.2. Damage Assessment:

The team consist of technical person as mentioned in ESF 1 will do the rapid damage assessment in post disaster as per Annexure – 2.

10.11.3. ESF 1:- Damage Assessment & Monitoring Team (DAMT):

Sl. No.	Particulars	Contact No.	Ward Nos.	Remarks
1	AE		Overall In charge	The officials will assess the ground situation in their respective areas and report to control room
2	JE 1		1,2,3,4	

Note: - Damage Assessment of Buildings through Rapid Visual Screening (RVS) as per Annexure – 3

ESF 2:- Rapid Assessment Team (RAT):

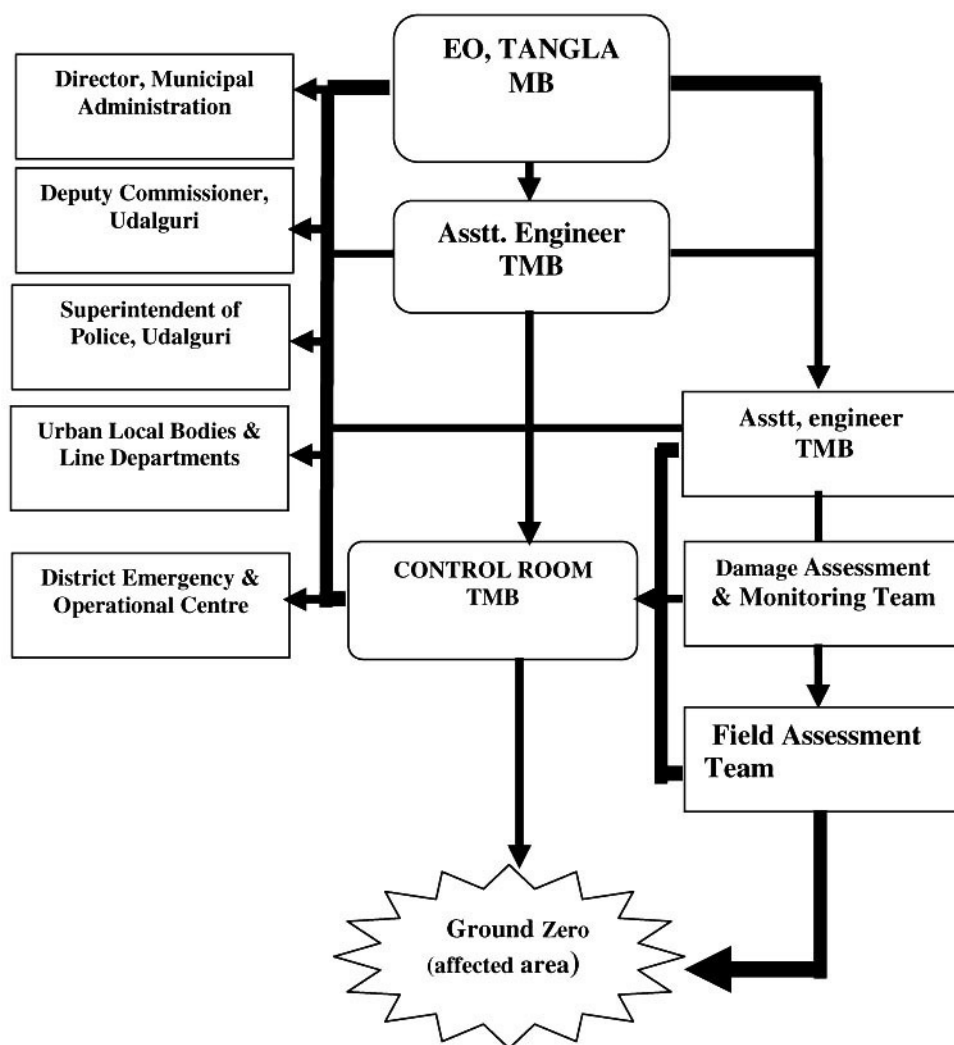
Sl. No.	Particulars	Contact No.	Area	Remarks
1	Head Assistant		Technical Supervisor will give necessary direction for field visit	The officials will assess the ground situation and assist / report to concern DAMT officials and report to control room
2	UDA			
3	LDA			
4	Tax Daroga			
5	Tax Collector			

10.11.4 ESF 3:- Control Room Setup & Logistics:

Head Asstt. (CONTROL ROOM IN-CHARGE) Mobile No:-	1. LDA 1 2. LDA 2
UD Asstt. (DATA COMPILATION & DAILY REPORT TO HEAD & CONCERN OFFICES) Mobile No:-	1 LDA 3 2. LDA 4
Junior Engineer (LOGESTIC & SAFETY / SECURITY OF OFFICIALS) Mobile No:-	1. Sanitary Inspector 2. Gr-IV-1 3. Gr-IV-2

10.11.5. EQUIPMENTS

Sl. No.	Particulars	Contact No.	Equipments	
1.	Asst. Engineer Tangla Municipal Board		JCB 2DX	1 No.
			Skid Steer Loader	1 Nos.
			Auto Tipper	2 Nos.
			Tractor with trailer	1 No.
			Tipper (407)	1 No.
			Push Cart	2 Nos.

10.12. Command and Control (SOP)

ANNEXURE – 1

1. Functional organization structure:

- a) Department of Housing & Urban Affairs at State Govt.
- b) Director, Municipal Administration, Dispur, Guwahati-6.
- c) Revenue Circle Office, Horisinga under Udalguri DDMA.

2. Inventory of departmental resources:

- a) Resource : - Department provides technical support.
- b) Capacity :- Officials to be trained for Earthquake engineering & Rapid Visual Screening etc
- c) Location : - Tangla Municipality,
MB Road,
PO - Tangla,
Pin-784521

3. Details of officers at State & District level:

- 1. Director, Municipal Administration, Dispur, Guwahati.
Phone:
- 2. Revenue Circle Office, Horisinga.
Phone:

4. Special decision making procedure: As per SOP.

5. Details of budget provision:

Budget provision is a must for successful implementation of SOP. Necessary direction to be received from Head office regarding such as provision related to Disaster.

6. Details of departmental officials:

SL. No.	NAME	DESIGNATION	MOBILE No.
1.		Executive Officer	
2.		Asstt. Engineer	
3.		Junior Engineer	
4.		Head Assistant	
5.		UDA	
6.		LDA	
7.		Tax Daroga	
8.		Tax Collector	
9.		Asstt. Tax Collector	
10.		Mohurrir	
11.		Sanitary Inspector	
12.		Electrical Line Attendant	
13.		Driver	
14.		Grade IV	
15.		Labourer	
16.		Harijon	

ANNEXURE - 2**Check list for damage assessment**

- i) Geographical area impacted
- ii) Structural damage to buildings etc.
- iii) Damage to roads and bridges, public buildings shops, workshops, stalls etc.
- iv) Damage to water supply lines, electricity supply lines, public utilities etc.

Tools for rapid assessment

- i) Photographs, video graph/film of the affected area
- ii) Field Report

Sl. No.	No. of Buildings / infrastructure affected	Location	Action Taken	Remarks/ Any SOS to Control Room

Name:-

Sign :-

Date :-

Note:- SOS related to Life trap, Emergency Medical support, Rescue etc.

- iii) Report from Administration/ ULBs/ Media etc.
- iv) Rapid Visual Screening (RVS) Survey
- v) Mapping of affected area / buildings / infrastructure
- vi) Safety Gear for officials.

Note : + sign indicate higher strength hence somewhat lower damage expected than that stated. Also Average damage in one building type in the area may be lower by one grade point than the probable maximum indicated. Surveyor will identify the Building Type, encircle it, also the corresponding damage grade and tick mark the recommendation.

Recommended Action:

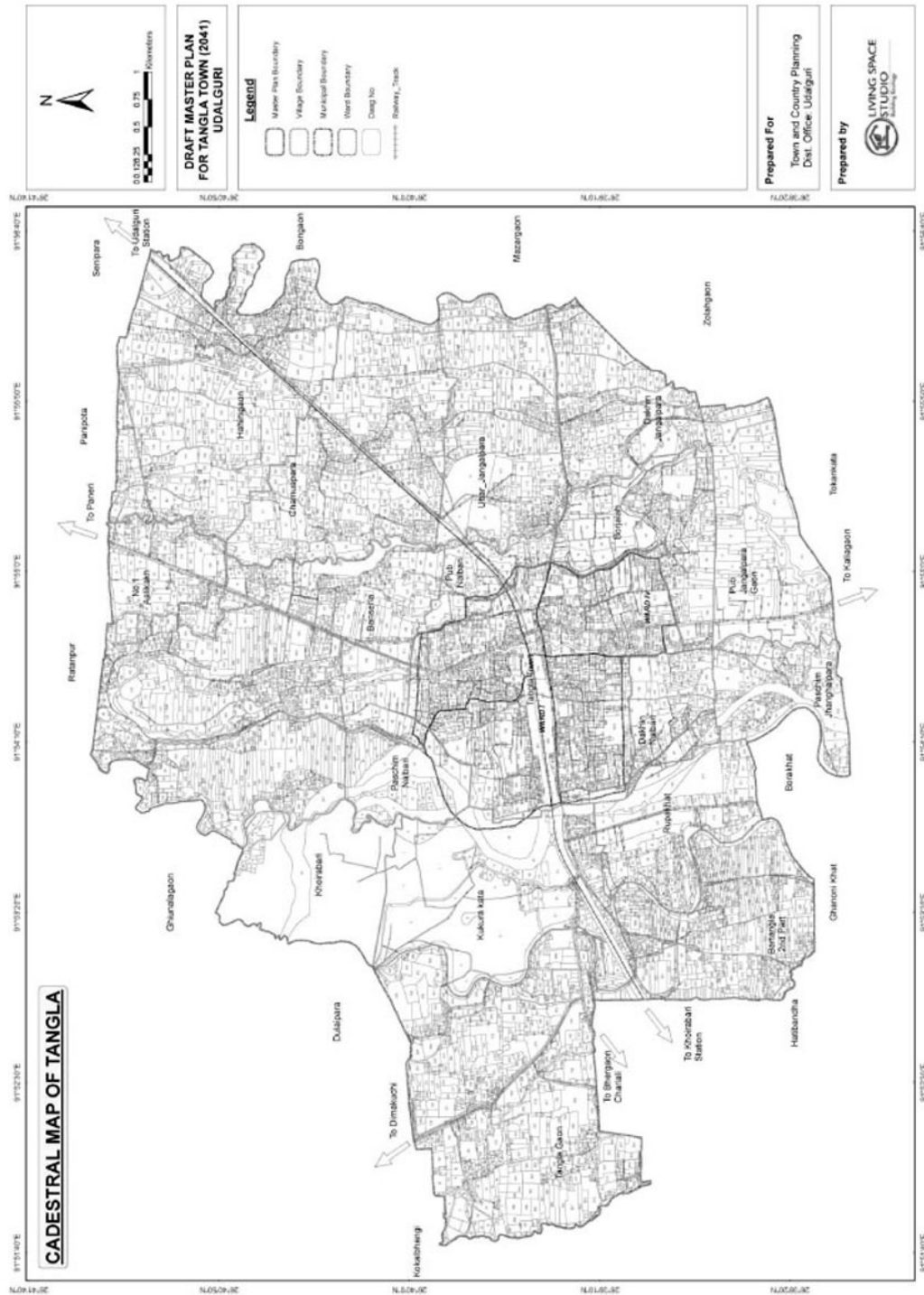
- 1) A, A+ or B, B+ : Evaluate in detail for need reconstruction or possible retrofitting to achieve type C or D
- 2) C, C+ : Evaluate in detail for need of retrofitting to achieve type D
- 3) URM infill : evaluate for need of reconstruction or possible retrofitting to level D
- 4) Wood : evaluate in detail for retrofitting

Surveyor's Signature _____

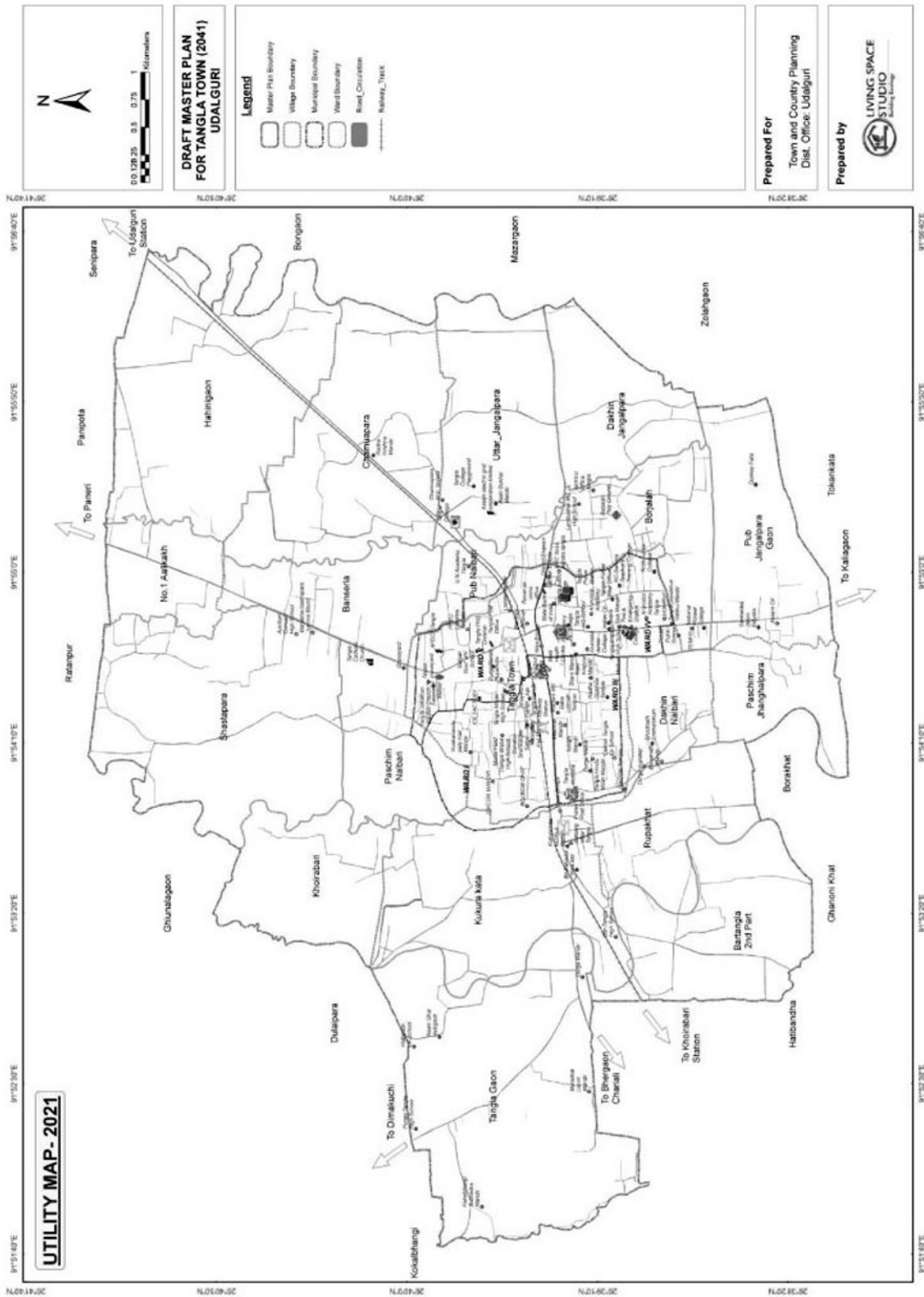
Name _____

Date _____

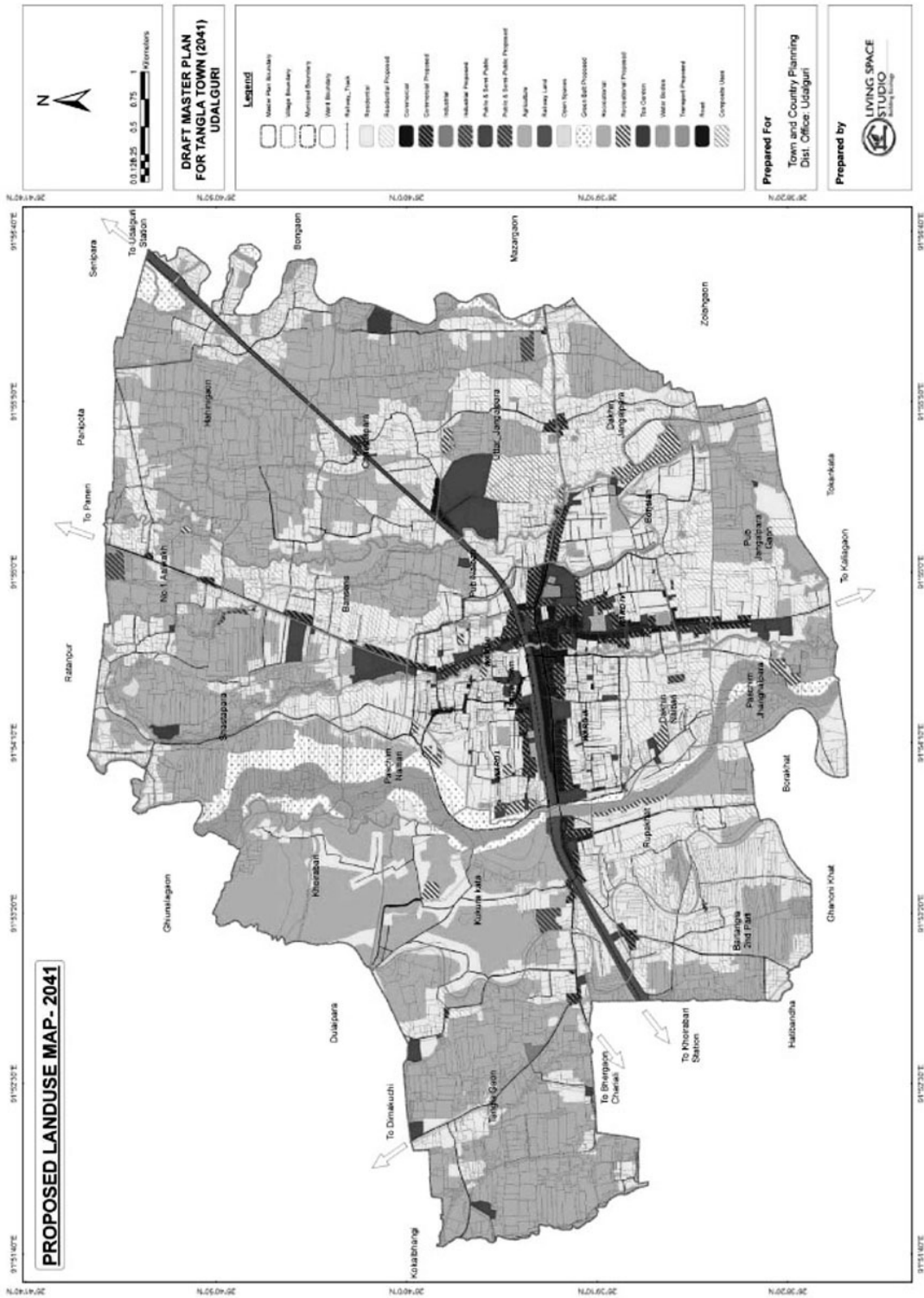
The Final Uniform Zoning Regulation, 2000 prepared by the Director, Town & Country Planning, Govt. of Assam, and adopted by Town & Country Planning Department of the State Government of Assam under Section 10(2) of the Assam Town & Country Planning Act 1959 (as amended) and the Assam Notified Urban Areas (Other than Guwahati) Building Rules, 2014 applicable to the municipalities under section 171 of the Municipal Act, 1956 (Assam Act no. 15 of 1957). The Development Authorities constituted under the provisions of the Assam Town and Country Planning Act, 1959, while taking any action under section 13 of the said Act **will be applicable for Tangla Master Plan Area.**



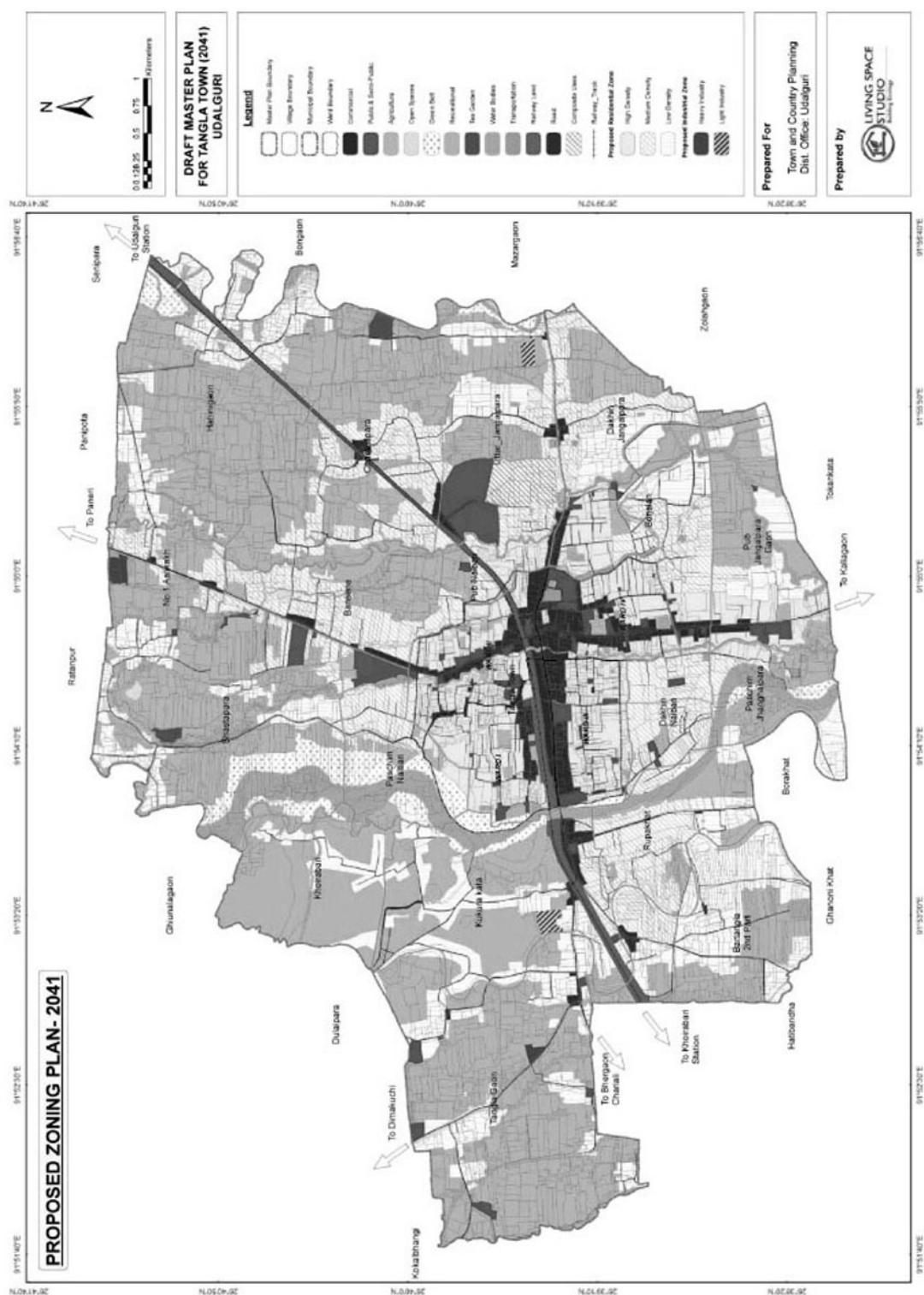
Cadastral Map of Tangla Master Plan Area



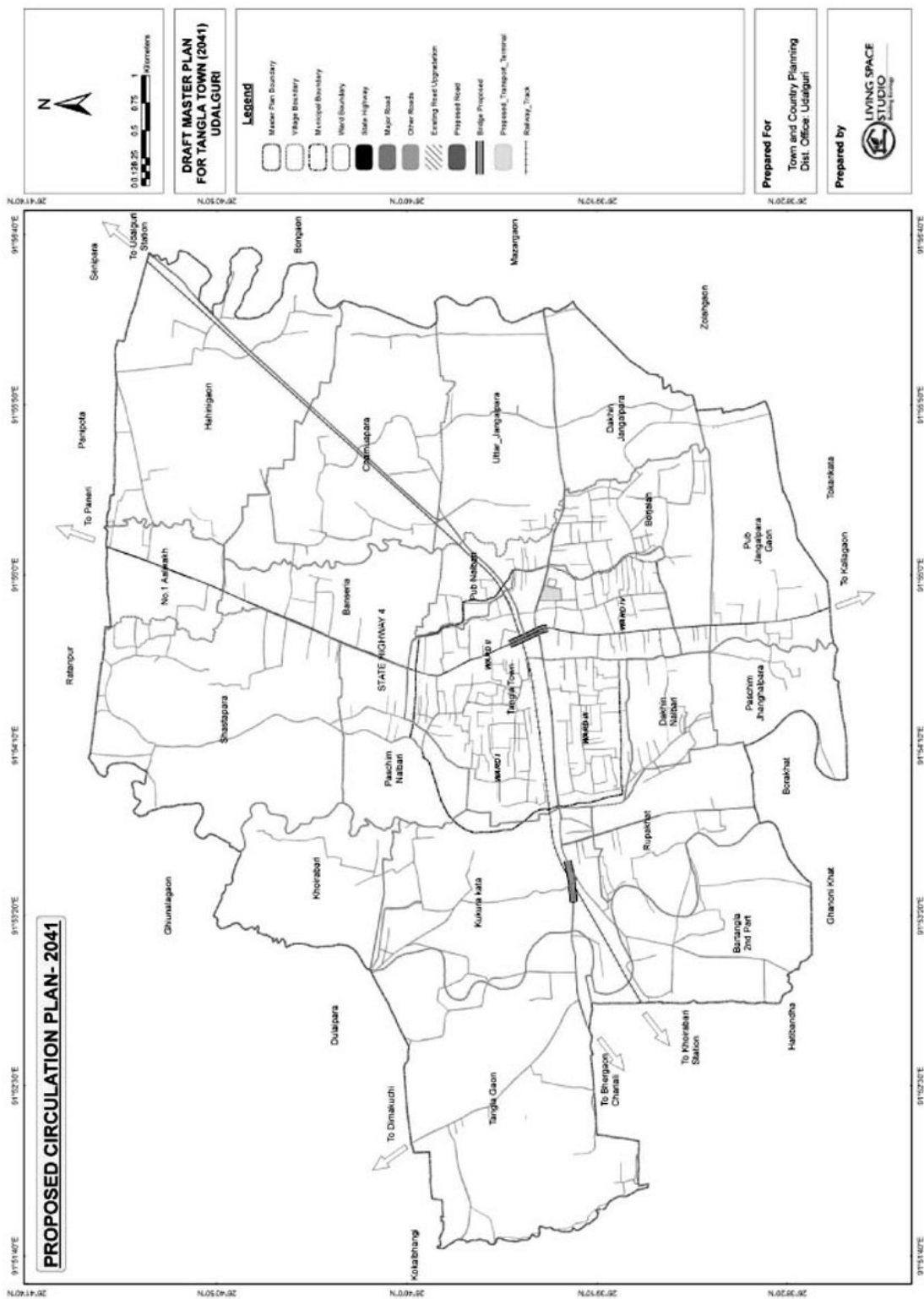
Existing Utility Map of Tangla Master Plan area



Proposed Land use Map of Tangla Master Plan Area



Proposed Zoning Map of Tangla Master Plan Area



Proposed Circulation Plan of Tangla Master Plan Area